

Amendments to the Claims

Listing of Claims:

1. (original) A method of packet detection, wherein a receiver receives an input
5 signal, the input signal comprising a packet, and the packet comprising a preamble
which comprises a plurality of pseudo-noise (PN) codes, the method comprising:
obtaining a correlation of the input signal;
detecting a peak power of the input signal; and
determining if the packet is detected according to the correlation and the peak power
10 of the input signal.
2. (original) The packet detection method in claim 1 further comprising filtering the
input signal.
- 15 3. (original) The packet detection method in claim 1 further comprising determining
the periodicity of peaks in the preamble.
4. (original) The packet detection method in claim 3 wherein determining the
periodicity of the preamble comprises performing a convolution for a conjugate of
20 a PN code and the PN codes to generate a processed preamble.
5. (currently amended) The packet detection method in claim [[1]] 4 wherein to
obtain a correlation of the input signal comprises obtaining a correlation of the
processed preamble.
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6. (original) The packet detection method in claim 4 wherein detecting a peak power
of the input signal comprises detecting a peak power of the processed preamble.

7. (original) The packet detection method in claim 1 further comprising obtaining an average power of the preamble.
- 5 8. (original) The packet detection method in claim 7 wherein the packet is detected when the ratio of the correlation to the average power of the preamble is larger than a predetermined value and when the ratio of the peak power to the average power of the noise is large than another predetermined value.
- 10 9. (original) The packet detection method in claim 1 further comprising obtaining an average power of noise of the preamble.
10. (original) The packet detection method in claim 9 wherein the packet is detected when the ratio of the correlation to the average power of the preamble is larger than
15 a predetermined value and when the ratio of the peak power to the average power of the noise is large than another predetermined value.
11. (canceled)
- 20 12. (currently amended) A packet detecting device comprising:
a receiving unit for receiving an input signal, the input signal comprising a packet,
the packet comprising a preamble;
a convolution operating unit connected to the receiving unit for performing a
convolution of the input signal;
25 a correlation calculating module connected to the convolution operating unit for
obtaining a correlation of the input signal;
a peak power detecting module connected to the convolution operating unit for
detecting a peak power of the input signal; and

a determining module connected to the correlation calculating module and the peak power detecting module comprising a determining unit which determines if the packet is detected according to the peak power and the correlation.

5 13. (original) The packet detecting device in claim 12 wherein the correlation calculating module comprises a power calculating unit for obtaining average power of the preamble.

10 14. (original) The packet detecting device in claim 13 wherein the correlation calculating module further comprises a division unit for dividing the correlation of the preamble by the average power of the preamble and outputting a division signal to the determining module.

15 15. (original) The packet detecting device in claim 13 wherein the correlation calculating module further comprises a multiplication unit for multiplying the average power of the preamble by a predetermined value and outputting a multiplication signal to the determining module.

20 16. (original) The packet detecting device in claim 12 wherein the peak power detecting module comprises a power calculating unit for obtaining average power of noise of the preamble.

25 17. (original) The packet detecting device in claim 16 wherein the peak power detecting module further comprises a division unit for dividing the peak power of the preamble by average power of the noise and outputting a division signal to the determining module.

18. (original) The packet detecting device in claim 16 wherein the peak power detecting

module further comprises a multiplication unit for multiplying the average power of the noise by a predetermined value and outputting a multiplication signal to the determining module.

- 5 19. (original) The packet detecting device in claim 14 wherein the peak power detecting module comprises a power calculating unit for obtaining average power of noise of the preamble.

20. (canceled)

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21. (original) The packet detecting device in claim 19 wherein the peak power detecting module further comprises a division unit for dividing the peak power of the preamble by average power of the noise and outputting a division signal to the determining module.

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22. (canceled)

23. (original) The packet detecting device in claim 17 wherein the determining module comprises a comparison unit for comparing the division signal of the peak power detecting module with a predetermined value.

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24. (original) The packet detecting device in claim 14 wherein the determining module further comprises a comparison unit for comparing the division signal of the correlation calculating module with a predetermined value.

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25. (original) The packet detecting device in claim 15 wherein the determining module further comprises a comparison unit for comparing the multiplication signal of the correlation calculating module with the correlation of the preamble.

26. (original) The packet detecting device in claim 18 wherein the determining module further comprises a comparison unit for comparing the multiplication signal of the peak power detecting module with the peak power of the preamble.

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27. (canceled)

28. (currently amended) The packet detecting device in claim ~~[[25]]~~ 26 wherein the determining module further comprises a comparison unit for comparing the multiplication signal of the peak power detecting module with the peak power of the preamble.

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29. (original) The packet detecting device in claim 27 wherein the determining module further comprises a determining unit for determining if the packet arrives according to comparison results of the comparison unit.

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30. (original) The packet detecting device in claim 28 wherein the determining module further comprises a determining unit for determining if the packet arrives according to comparison results of the comparison unit.

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